

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:  
a first gate insulating film and a second gate insulating  
5 film, both formed on a semiconductor layer;  
a gate electrode formed to be bridged over said first  
gate insulating film and said second gate insulating film;  
a body region formed adjacent to said gate electrode;  
a source region having an opposite conductive type to  
said body region and formed within said body region; and  
a drain region having the opposite conductive type to  
said body region and formed at a position separated from said  
body region,  
wherein said first gate insulating film is manufactured  
15 in such a manner that an insulating film formed on said  
semiconductor layer is patterned by way of the LOCOS method.

2. The semiconductor device as claimed in claim 1,  
wherein said first gate insulating film have a tapered surface.

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3. The semiconductor device as claimed in claim 1,  
wherein said first gate insulating film is not formed at a  
position lower than at least a surface position of said  
semiconductor layer.

4. The semiconductor device as claimed in claim 1,  
wherein said first gate insulating film is not formed at a  
position lower than a surface position of said semiconductor  
layer in such a manner that local current crowding is not  
5 produced between at least an edge portion of said body region  
and an edge portion of said first gate insulating film.

5. A method for manufacturing a semiconductor device,  
comprising the steps of:

10 forming a body region by implanting to diffuse an impurity  
in a predetermined region of a semiconductor layer;

15 after field-oxidizing a surface region of said  
semiconductor layer by way of the LOCOS method to form an  
insulating film, forming a first insulating film by patterning  
said insulating film while a resist film formed on a  
predetermined region of said insulating film is employed as  
a mask;

20 forming a second gate insulating film on said semiconductor  
layer other than said first gate insulating film, and then  
forming a gate electrode so that said gate electrode is bridged  
over said first gate insulating film and said second gate  
insulating film; and

25 forming a source region and drain region by implanting  
an impurity of an opposite conductive type to said body region  
into both a source forming region formed within said body

region and a drain forming region formed within said semiconductor layer while a resist film having an opening is employed as a mask.

5        6. The semiconductor device manufacturing method as claimed in claim 5, wherein a device separation film is formed in the same step of forming said first gate insulating film.

6        7. The semiconductor device manufacturing method as  
7        10 claimed in claim 5, wherein said first gate insulating film is not formed at a position lower than at least a surface position of said semiconductor layer in the step of forming said first gate insulating film.

8        8. The semiconductor device manufacturing method as  
9        15 claimed in claim 5, wherein, in the step of forming the first gate insulating film, said first gate insulating film is not formed at a position lower than a surface position of said semiconductor layer so that local current crowding is not  
10      20 produced between at least an edge portion of said body region and an edge portion of said first gate insulating film.